Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

HW#13 Pythagorean Theorem

Geometry

Due: Tuesday September 29th

Failure to show your work will result in LaSalle.

|  |  |
| --- | --- |
| ***Pythagorean Theorem:***   * + ***a, b, and c*** *are the 3 sides of a*   + ***c*** *is* ***always*** *the (longest side)*   + ***a*** *&* ***b*** *are called the “ ” of the right triangle.* * *Used to find the of a right triangle.*   ***To use the Pythagorean Theorem, you must:***   1. *Determine if it’s a .* 2. *Identify the (side “****c****”)*    1. *ALWAYS from the 90 angle.*    2. *ALWAYS the side of a right triangle (across from the angle)*    3. *It does not matter which leg is “ ” and which leg is “ ”*  * On the triangle to the right: * Label the right angle * Label each side (a, b, and c) | |
| 1. What is the length of the hypotenuse if the sides of a right triangle are 12 and 16? Draw a label a picture. | 2. What is the length of the hypotenuse if the sides of a right triangle are 7 and 24? Draw a label a picture. |
| 3. Is the triangle below a right triangle?  7  12  16 | 4. Is the triangle below a right triangle?  15  9  12 |

|  |  |
| --- | --- |
| 5. What is the distance between Point T(0,0) and R(-4,0)?  http://s3.amazonaws.com/edcanvas-uploads/117591/local/1380306229/coordinate-plane1-1005x1024.png | 6. What is the distance between Point X(0,5) and Y(8,5)?  http://s3.amazonaws.com/edcanvas-uploads/117591/local/1380306229/coordinate-plane1-1005x1024.png |
| 7. What is the distance between Point K(-2,3) and Q(4,3)?  http://s3.amazonaws.com/edcanvas-uploads/117591/local/1380306229/coordinate-plane1-1005x1024.png | 8. What is the distance between Point H(4.2) and F(4,6)?  http://s3.amazonaws.com/edcanvas-uploads/117591/local/1380306229/coordinate-plane1-1005x1024.png |
| 7. | 10. On a number line, point W is located at -33, point X is located at 8, point Y is located at -17, and point Z is located at 3. Name the longest line segment formed by these points.  A. WX B. XY C. YZ D. WZ E. XZ |